

CLAIMS

We claim:

1. A method for conveying a Small Computer System Interface (SCSI) command from a host to a logical volume,
5 the method comprising:

incorporating an indication of an address of the logical volume in the SCSI command so as to generate a modified SCSI command;

conveying the modified SCSI command from the host to a
10 target device;

receiving the modified SCSI command at the target device and recovering the address from the modified SCSI command; and

executing the SCSI command at the logical volume in
15 response to the recovered address.

2. The method according to claim 1, wherein the logical volume comprises at least one of a volume partition and a logical unit.

3. The method according to claim 1, wherein the
20 indication comprises the address of the logical volume.

4. The method according to claim 1, wherein the logical volume is comprised in a plurality of logical volumes, and wherein the target device is comprised in the plurality.

5. The method according to claim 1, wherein receiving the
25 modified SCSI command at the target device comprises converting the modified SCSI command to the SCSI command and conveying the SCSI command to the logical volume in response to the recovered address.

6. The method according to claim 1, wherein the SCSI command comprises a logical block address (LBA) in the logical volume.

7. A method for accessing data, comprising:

5 generating in a host an interface object;

generating in the host a first plurality of device objects adapted to convey a data command from the host to a second plurality of logical volumes;

10 writing in the interface object from an application one or more indications of addresses of the logical volumes, the one or more indications comprising a target-indication of an address of a targeted logical volume;

designating one of the device objects to convey the data command to the targeted logical volume in response to 15 the target-indication in the interface object; and

accessing the data in the targeted logical volume in response to the data command.

8. The method according to claim 7, wherein designating the one of the device objects comprises:

20 opening a connection between the one of the device objects and the targeted logical volume; and

conveying the data command via the connection.

9. The method according to claim 8, and comprising writing an indication of the connection in the interface 25 object.

10. The method according to claim 7, wherein the interface object comprises at least one of a file and a pseudo-file.

11. The method according to claim 7, wherein accessing the data comprises one of reading the data from the targeted

logical volume and writing the data to the targeted logical volume.

12. The method according to claim 7, and comprising:

performing an execution of the data command at the
5 targeted volume; and

removing the target-indication from the interface object in response to the execution.

13. The method according to claim 7, wherein writing in the interface object comprises the application polling the
10 interface object to perform the writing.

14. The method according to claim 13, wherein the application polling the interface object comprises the application removing the target-indication from the interface object in response to an execution of the data
15 command at the targeted volume.

15. The method according to claim 7, wherein the host and the logical volumes operate according to a Small Computer System Interface (SCSI) protocol.

16. The method according to claim 15, wherein the data
20 command comprises a SCSI command, the method further comprising:

incorporating the target-indication in the SCSI command so as to generate a modified SCSI command;

conveying the modified SCSI command from the host to a
25 target device;

receiving the modified SCSI command at the target device and recovering the address from the modified SCSI command; and

executing the SCSI command at the targeted logical volume in response to the recovered address.

17. Apparatus for conveying a Small Computer System Interface (SCSI) command from a host to a logical volume,
5 the apparatus comprising:

a processor which is adapted to:

incorporate an indication of an address of the logical volume in the SCSI command so as to generate a modified SCSI command, and

10 convey the modified SCSI command from the host; and
a target device which is adapted to:

receive the modified SCSI command at the target device and recover the address from the modified SCSI command, and

convey the SCSI command to the logical volume, for
15 execution therein, in response to the recovered address.

18. The apparatus according to claim 17, wherein the logical volume comprises at least one of a volume partition and a logical unit.

19. The apparatus according to claim 17, wherein the
20 indication comprises the address of the logical volume.

20. The apparatus according to claim 17, wherein the logical volume is comprised in a plurality of logical volumes, and wherein the target device is comprised in the plurality.

25 21. The apparatus according to claim 17, wherein the target device is adapted to convert the modified SCSI command to the SCSI command.

22. The apparatus according to claim 17, wherein the SCSI command comprises a logical block address (LBA) in the logical volume.

23. Apparatus for accessing data, comprising:

5 a targeted logical volume which is adapted to access the data in response to a data command; and

 a host comprising:

 an interface object;

10 a first plurality of device objects adapted to convey the data command from the host to a second plurality of logical volumes; and

 a processor which is adapted to:

15 write in the interface object from an application one or more indications of addresses of the logical volumes, the one or more indications comprising a target-indication of an address of the targeted logical volume, and

20 designate one of the device objects to convey the data command to the targeted logical volume in response to the target-indication in the interface object.

24. The apparatus according to claim 23, wherein designating the one of the device objects comprises:

25 opening a connection between the one of the device objects and the targeted logical volume; and

 conveying the data command via the connection.

25. The apparatus according to claim 24, wherein the processor is adapted to write an indication of the connection in the interface object.

26. The apparatus according to claim 23, wherein the interface object comprises at least one of a file and a pseudo-file.

27. The apparatus according to claim 23, wherein accessing
5 the data comprises one of reading the data from the targeted logical volume and writing the data to the targeted logical volume.

28. The apparatus according to claim 23, wherein the targeted logical volume is adapted to perform an execution
10 of the data command thereat, and wherein the processor is adapted to remove the target-indication from the interface object in response to the execution.

29. The apparatus according to claim 23, wherein writing in the interface object comprises the application polling
15 the interface object to perform the writing.

30. The apparatus according to claim 29, wherein the application polling the interface object comprises the application removing the target-indication from the interface object in response to an execution of the data
20 command at the targeted volume.

31. The apparatus according to claim 23, wherein the host and the logical volumes operate according to a Small Computer System Interface (SCSI) protocol.

32. The apparatus according to claim 31, wherein the data
25 command comprises a SCSI command, wherein the processor is adapted to:

incorporate the target-indication in the SCSI command so as to generate a modified SCSI command,

convey the modified SCSI command from the host;

the apparatus further comprising:

a target device which is adapted to receive the modified SCSI command and recover the address from the modified SCSI command and convey the SCSI command to the
5 targeted logical volume, for execution therein, in response to the recovered address.